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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/385,574 08/30/99 OGAWA

T 0186-13

EXAMINER

IM52/0913

THOMAS W COLE ESQUIRE
SIXBEY FRIEDMAN LEEDOM & FERGUSON PC
8180 GREENSBORO DRIVE
SUITE 800
MCLEAN VA 22102

NGUYEN, K

ART UNIT

PAPER NUMBER

5

1774

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/385,574

Applicant(s)

OGAWA ET AL.

Examiner

Kimberly T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The part of claim 2 wherein the substrate is “disposed relative to the reinforcement member such that the primary direction of the plastic film can be freely set relative to the alignment direction of the fibers” lacks enablement since the specification does not clearly show how to perform this step. For purposes of examining claim 2, this part of the claim will not be considered until clarified.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what “an upper layer of” the lubricant coating and what “a lower layer of” the shield coating are. Further, it is not clear what “an intermediate layer” of the reinforcement member is. It seems that the terms within the apostrophes are not needed, unless

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Applicant intends to distinguish between an upper half of the light shielding blade material and a lower half of the material.

Claim 2 recites the limitation "the primary direction" in the last three lines of claim 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 is indefinite. It is not clear what is meant by the substrate "being disposed relative to the reinforcement member such that the primary direction of the plastic film can be freely set relative to the alignment direction of the fibers."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S. Pat. No. 5,202,715 in view of Takahashi et al., U.S. Pat. No. 6,001,465.

Matsubara shows a plate member used in light shielding blades comprising at least one reinforced-resin intermediate layer composed of a resin matrix with uni-directionally oriented carbon fibers (substrate and light shield coatings) and at least one reinforced-resin surface layer on both sides of the intermediate layers including carbon fibers uni-directionally (parallel) arranged in an orthogonal direction (reinforcement member) to that of the carbon fibers in the intermediate layers (column 1, lines 20-30). Matsubara shows the intermediate and surface ^{prepreg} layers are composed of a thermosetting resin (column 3, lines 25-26 and lines 44-47). Matsubara shows that carbon black may be selectively added to either the prepreg sheets of the surface

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layers or only to the prepreg sheet(s) of the intermediate layer(s) (column 4, lines 1-5). For example, with three intermediate layers, one being the substrate and the two other intermediate layers flanking the intermediate-substrate layer, carbon black may be selectively added to the two other intermediate layers (light shield coatings) and not the intermediate-substrate layer to yield an optical density of the intermediate-substrate of zero. Further, a black lubricant coating may cover the laminate structure to improve light-shielding and lubrication (column 4, lines 6-12).

Matsubara shows that 10 weight % of carbon black is used in the intermediate layers (column 4, lines 60-63 and column 6, lines 12-16). However, Matsubara does not show that the two intermediate layers (light shield coatings) contain 20% to 40% by weight of carbon black such that the sum of an optical density of one shield coating and of the intermediate-substrate is 6 or more, and a total optical density of a layer structure is 12 or more as in instant claim 7. However, where the general conditions of a claim are disclosed by the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use 20% to 40% by weight of carbon black in the intermediate layers to achieve the optical densities as in instant claim 7.

Matsubara does not show the central intermediate layer (substrate) comprises polyethylene terephthalate, polyethylene naphthalate, or aramid film as in instant claim 6.

Takahashi shows a light shielding blade comprising a plastic substrate such as polyethylene terephthalate (column 1, line 51-52). Takahashi also shows that the plastic substrate may comprise aramid with the addition of carbon black to increase the optical density

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to at least 2 (column 4, line 44-49). Further Takahashi shows that the total optical density of the light shielding blade is required to be 8 or higher to shield the light (column 4, lines 49-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use polyethylene terephthalate or aramid film as a substrate for light shielding blades since it is known in the art of optical apparatus to use such materials due to their lightness, rigidity, and durability.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S. Pat. No. 5,202,715 in view of JP 09274218 (JP '218).

Matsubara shows a plate member used in light shielding blades comprising at least one reinforced-resin intermediate layer composed of a resin matrix with uni-directionally oriented carbon fibers (substrate and light shield coatings) and at least one reinforced-resin surface layer on both sides of the intermediate layers including carbon fibers uni-directionally (parallel) arranged in an orthogonal direction (reinforcement member) to that of the carbon fibers in the intermediate layers (column 1, lines 20-30). Further, a black lubricant coating may cover the laminate structure to improve light-shielding and lubrication (column 4, lines 6-12). Matsubara does not show that the central intermediate layer (substrate) is stretched bidirectionally in primary and secondary directions orthogonal to each other as in instant claim 2.

JP '218 shows a light shieldable film for optical apparatus wherein the base film comprises a thermoplastic resin such as polyethylene terephthalate (PET) (Abstract). The PET film is preferably biaxially stretched. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a biaxially stretched substrate film in a light shielding blade in order to impart improved light shieldability and rigidity.

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Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S. Pat. No. 5,202,715 in view of Takeshi et al., JP 101058417.

Matsubara shows a plate member used in light shielding blades comprising at least one reinforced-resin intermediate layer composed of a resin matrix with uni-directionally oriented carbon fibers (substrate and light shield coatings) and at least one reinforced-resin surface layer on both sides of the intermediate layers including carbon fibers uni-directionally (parallel) arranged in an orthogonal direction (reinforcement member) to that of the carbon fibers in the intermediate layers (column 1, lines 20-30). Matsubara shows the intermediate and surface layers are composed of a thermosetting resin (column 3, lines 25-26 and lines 44-47). Further, a black lubricant coating may cover the laminate structure to improve light-shielding and lubrication (column 4, lines 6-12). Matsubara does not show that the reinforcement fibers are comprised of polyparaphenylene benzobixoxazole as in instant claim 5.

Takeshi shows a prepreg formed from a thermosetting resin with fiber reinforcement comprised of poly-para-phenylenebenzobisoxazole fibers to obtain a tough and impact-resistant prepreg. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ fibers made of poly-para-phenylenebenzobisoxazole in a light shielding film to impart rigid reinforcement to the film.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kimberly Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday through Fridays.

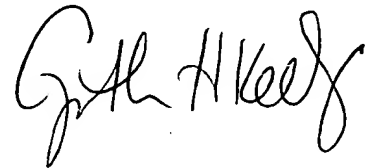
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3559 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kimberly T. Nguyen
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

A handwritten signature in black ink, appearing to read "Cynthia H. Kelly", is written over the printed name and title.